

## REMARKS

Claims 1 to 9, 12 to 16, 18 to 20 and 25 through 42 continue to be in the case. New claim 43 is being submitted. The new claim 43 is based on the language of claim 25.

### *The Office Action refers to Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 UR 1.114, including the fee set forth in 37 UR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/28/06 has been entered.

Applicant appreciates the entry of applicant's submission of March 28, 2006.

### *Priority*

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 7/12/02. It is noted, however, that the Office does not appear to have a certified copy of the 102 31 896.4 application as required by 35 U.S.C. 119(b).

Applicant alleges that a German priority document was mailed to the Office on 8/5/03. Applicant also alleges that they have a receipt postcard stamped 8/11/03. The examiner respectfully asks applicant to submit a copy of the receipt postcard stamped 8/11/03, along with a copy of that German priority document, to fulfill the requirements of 35 U.S.C. 119(b).

The undersigned attorney will make an effort to clarify the situation surrounding applicant's priority.

3. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Germany on 7/8/03. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

Applicants are in the process of furnishing a new oath or declaration.

It is noted that applicant attempted to claim priority to the 102 31 896.4 and the 030 15 337.3 applications in the document titled "Claim of Priority", which was filed 7/10/03. However, this does not fulfill the requirements of 37 CFR 1.63(c). Furthermore, the information provided therein appears incorrect. The filing date of the 102 31 896.4 application is not 7/12/03, and the filing date of the 030 15 337.3 application is not 7/8/00.

Applicants are in the process of fulfilling the requirements of 37 CFR 1.63 (c).

*The Office Action refers to the Specification.*

4. The following guidelines illustrate the preferred layout for the specification of a utility

application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the Phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a), "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION. (1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on a paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on a compact disc).

Applicant is amending the specification by incorporating such language as kindly proposed in the Office Action.

*The Office Action refers to Claim Objections.*

5. Claims 1-9, 12-16, and 18-42 stand objected to because of the following informalities, which appear to be minor draft errors including grammatical and/or lack of antecedent basis problems. In the following format (location of objection; suggestion for correction), the following correction(s) may obviate the objection(s): (claim 1, line 1, "the actual position"; replacing "the" with -a- -), (claim 1, line 2; replacing "whereby" with - -wherein- -), (claim 1, line 2; replacing "CT" with - -computed tomography (CT)- -) and others.

Applicant sincerely appreciates the kind effort made by the Examiner in pointing out in detail the claim objections. The present amendment intends to obviate all claim objections by appropriate amendment of the claims.

6. Claims 2, 7-9, 12-16, 18, 20-39, 41, and 42 stand rejected under 35 U.S.C. 112, second Paragraph, as being indefinite for failing to particularly point out and distinctly Claim the subject matter which applicant regards as the invention.

7. The Phrase "can be" (in claim 2, line 17; claim 8, line 6; claim 8, line 13; claim 8, line 20; claim 9, line 3; claim 12, line 18; claim 13, line 18; claim 13, line 25; Claim 13, line 32; claim 13, line 39; claim 13, line 55; claim 14, line 48; claim 16, line 3; claim 20, line 18; claim 21, line 18; claim 25, line 10; claim 25, line 13; claim 25, line 14; claim 26, line 4; claim 27, line 3; claim 28, line 6; claim 30, line 2; claim 31, line 4; claim 32, line 3; claim 32, line 6; claim 32, line 7; claim 32, line 9; claim 33, line 2; claim 34, line 4; claim 34, line 5; claim 35, line 15; claim 35, line 19; claim 35, line 22; claim 35, line 23; claim 35, line 25; claim 35, line 27; claim 35, line 30; claim 37, line 2; claim 37, line 3; claim 38, line 3; and Claim 39, line 3) renders the Claim indefinite because it is unclear whether the limitation(s) following the Phrase are Part of the claimed invention. See MPEP § 2173.05(d). Claims 8, 9, 15, 16, 18, 22-24, and 26-39 are rejected by virtue of their dependency.

Applicant is amending the claims by eliminating the rejected language involving "can" from the claims.

B. The Phrase "preferably" (in claim 7, line 5; claim 24, line 3; and Claim 30, line 51 renders the Claim indefinite because it is unclear whether the limitation(s) following the Phrase are Part of the claimed invention.

Applicant is amending the claims by eliminating the rejected language involving "preferably" from the claims.

9. The Phrase "makes it possible" (in claim 21, line 25; and Claim 41, line 24) renders the Claim indefinite because it is unclear whether the limitation(s) following the Phrase are Part of the claimed invention. Claims 22 and 42 are rejected by virtue of their dependency.

Applicant is amending the claims by eliminating the rejected language involving "makes it possible" from the claims.

The examiner has examined the claims as best understood as follows.

*The Office Action refers to Claim Rejection - 35 USC § 102*

10. Claims 25-34 stand rejected under 35 U.S.C. 102(e) as being anticipated by Zylka et al. (US 6490477) 1 1. Regarding claim 25, Zylka et al. discloses a device for determining an actual position of a structure of an object to be examined (col. 12, lines 29-31) in a coordinate system, with a CT scanner (col. 8, lines 14-16), necessarily having a first coordinate system, the CT coordinate system. related to

said CT scanner (col. 3, lines 39-45) for transformations, and with a coordinate measuring measurement (MI) which is either a tactile or an optical coordinate measuring instrument, a multisensor coordinate measuring instrument (fig. 1, #9 and 41), or an ultrasonic coordinate measuring instrument, having a second coordinate system, the MI coordinate system, related to said coordinate measuring instrument (col. 3, lines 39-49, measured position of the surgical instrument), wherein the CT scanner (fig. 2, #2 and 3) and the coordinate measuring instrument (fig. 2, #9) are integrated into one single device (fig. 2, #1).

Note that functional recitations, including wherein coordinates of the object to be examined are determined in the MI coordinate system, and a target position of the structure within the object to be examined is predefined, so that the target position is determined in the MI coordinate system, and the object to be examined is positioned in such a way that the target position of the structure comes to lie within a volume detected by the CT scanner. have not been given patentable weight because they are narrative in form.

Applicant respectfully traverses.

Applicant respectfully submits that the functional limitations of claim 25 are real requirements of applicant's claim 25. These functional limitations are new and nonobvious. In general, anything which is new and nonobvious over the art of record is subject to patenting. Therefore, claim 25 is patentable over the art of record.

Applicant further respectfully disagrees as to the allegation that the functional limitations are presented in narrative form. Applicant urges that the functional limitations

are presented in a logical sequence and their language is adapted to be understood most easily.

Regarding MPEP 2114 it is believed that there are many instances where functional language has been used to distinguish apparatus claims over the art. The statement of a different functioning or of a different interaction between claim elements of a claim clearly can patentably define and distinguish over the prior art.

Claim 25 requires also “a volume detected by the CT scanner” to be furnished for containing a target position of the structure. No such “volume detected by the CT scanner” is furnished in the Zykla et al. reference..

*The Office Action refers to Claim Rejections - 35 USC § 103*

21. Claims 35-39 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Zylka et al. as applied to claim 25 above, and further in view of Pfoh (US 5291402).

The rejection is respectfully traversed.

22. Regarding claim 35, Zylka et al. discloses a device as recited above. Zylka et al. further discloses wherein the CT scanner has an X-ray source (fig. 1, #2) and a position resolving detector (fig. 1, #3) having an active detector surface that is sensitive to radiation emitted by the X-ray source (fig. 1, #2), and wherein an image field of the CT scanner is necessarily defined by the size of the active detector surface (fig. 1, #3).



However, Zylka et al. fails to disclose a two-dimensional detector. Pfoh teaches a two-dimensional detector (fig. 3, #44).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to include the device of Zylka et al. with the detector of Pfoh, since one would be motivated to make such a modification to reduce the effect of skew (col. 5, lines 60-66) as shown by Pfoh.

Applicant respectfully disagrees.

A substitution of the detector of Zylka et al. by a two dimensional detector of Pfoh will do nothing, since Zylka does not teach an interface for a two dimensional detector. Also, the substitution of the detector 3 of Zylka et al. by the detector array 44 of the reference Pfoh would not work with the X-ray source 2 of Zylka et al., where the X-ray source of Zylka et al. is laid out for a one dimensional detector.

Also note that functional recitations, including wherein the target position of the structure, relative to at least three selected, non-co-linear points of the object to be examined, is predefined and the actual position differs from the target position by a tolerance deviation at most, so that the actual position lies within a tolerance volume whose edge is at a distance from the target position by the tolerance deviation at most, and a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system are known or are determined by means of calibration, wherein by means of the coordinate measuring instrument, a location of the at least three selected points of the object to be examined are determined relative to the MI coordinate system. the target position of the structure relative to the MI coordinate system is calculated from the determined

locations, the target position of the structure is converted from the MI coordinate system to the CT coordinate system, so that the location thereof is determined in the CT coordinate system, a relative position of the object to be examined relative to the CT scanner is regulated by means of a traveling mechanism, using the target position of the structure relative to the CT coordinate system, in such a way that the tolerance volume and thus also the structure lie within the volume that is detected by the CT scanner, and the CT scanner creates a three-dimensional digital CT image of the tolerance volume, including the structure, and stores the three-dimensional digital CT image as a CT data record, so that the actual position as well as a shape of the structure is determined in the coordinate system on the basis of the CT data record, have not been given patentable weight because they are narrative in form.

Applicant respectfully disagrees based on the above statements made in connection with the rejection under 35 USC 102.

Applicant further notes that the references Zylka et al. and Pfoh do not teach anything about the functional limitations of claim 35. Therefore there is no motivation within the four corners of the references to do what applicant's claim 35 requires.

Applicant points further to numerous features which are required in claim 35 which are not addressed in any one of the applied references. While the applicant specifies for example "a tolerance volume", or "a traveling mechanism", such features of claim 35 are not suggested or taught by the references Zylka et al. and/or Pfoh..

*The Office Action refers to Allowable Subject Matter*


27. Claims 1-9, 12-16, 18-24, and 40-42 would be allowable if rewritten or amended to overcome the respective claim objections and rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Applicant appreciates the finding of allowable subject matter in claims 1-9, 12-16, 18-24, and 40-42. An effort has been made in this amendment to provide for claim corrections in order to place these claims in fully allowable form.

Reconsideration of all outstanding rejections is respectfully requested.

Respectfully submitted,

Mario Schroeder et al.

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